

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraphs at page 23 line 25 to page 30 line 16 with the following paragraphs:

For Figure 5:

cytochrome c oxidase subunit Vic sense oligo

5'-NH2-ctgttgtcactgggtgacctccgcctgtggcgctccacggccctggctacggccatcatgag-3'
(SEQ ID NO: 1)

Beta actin sense oligo

5'-NH2-tggaacggtaaggtacagcagtcggtgagcgagcatccccaaagttcacaatgtggccgaggact-3'
(SEQ ID NO: 2)

For Figure 6:

CAPTURE SEQUENCES:

1 (glutamyl-prolyl-tRNA synthetase):

gagggttccaggttatattcctggccagtttctcattattcagct-NH2 **(SEQ ID NO: 3)**

2 (Homo sapiens cDNA clone IMAGE:4093756, partial cds):

acacatccgtctcctctgcgatataaccaaatggtttgacggttaat-NH2 **(SEQ ID NO: 4)**

2B: ttaatgttctaacaaggcgatcatgcaaacggagattagaggttatac-NH2 **(SEQ ID NO: 5)**

3 (hypothetical protein FLJ14668):

taagggagtcagctatcctagccaaaggctactttctccctga-NH2 **(SEQ ID NO: 6)**

4 (3-ketoacyl CoA thiolase beta-subunit of mitochondrial trifunctional protein, exon 8, 9, 10):

ccgttagggcttgcgtatgcaggtttagttggccatctgctccagtga-NH2 **(SEQ ID NO: 7)**

5 (chromatin assembly factor 1, subunit B (p60)):

tgtgtcacccacgaggatgccaggaggactactgatttcacact-NH2 (SEQ ID NO: 8)

5B: atactctaaaattcgacagagtaaaatctcaaattacttctcatcttcc-NH2 (SEQ ID NO: 9)

6 (transcription factor 3, TCF3):

actgctgttcttcctcgcgctgggtgaatctggtttgaattctatg -NH2 (SEQ ID NO: 10)

7 (cDNA FLJ37123 fis):

cggaagtggaggcgcatgcagcgccctgcctggagccaggcgatc-NH2 (SEQ ID NO: 11)

7S:

NH2-atgcctggctccaggcaggaggcgctgcattgcacgcctccaacttccg (SEQ ID NO: 12)

8 (adenosine monophosphate deaminase 2, isoform L):

aacaccactcccggggtgagtggcagatccaggacttgcagcaactgt-NH2 (SEQ ID NO: 13)

8B: tatgaaacactgcagttcacagcaaaggcctcagtcagaacacaacata-NH2 (SEQ ID NO: 14)

9 (chromatin assembly factor 1, subunit B (p60)):

tgtgtcacccacgaggatgccaggaggactactgatttcacact-NH2 (SEQ ID NO: 15)

10 (isoleucine-tRNA synthetase):

tgtaacctgctccaaacatgactgcatagggtctaaaggtaagtgtcaa-NH2 (SEQ ID NO: 16)

11 (seryl-tRNA synthetase):

tggtttcatcagtcatcaatgatgggtccatgcgaggagaca-NH2 (SEQ ID NO: 17)

12 (Ribosomal Protein L32):

tactcatttcactgcgcagcctggcattgggtggactctgat-NH2 (SEQ ID NO: 18)

13 (actin, beta):

actgggccatttccttagagagaagtgggtggcttttagatggcaag-NH2 (SEQ ID NO: 19)

13S:

NH2-ttgcacatctaaaagccacccacttcctctaaggagaatggccagt (SEQ ID NO: 20)

14 (ubiquitin B):

atcttggccttcacatttcgatgggtcactggctccacccagat-NH2 (SEQ ID NO: 21)

For Figure 7:

CAPTURE SEQUENCES:

1 (glutamyl-prolyl-tRNA synthetase):

gagggttccagggttatattcctggccagtttctccttatattcagct-NH2 (SEQ ID NO: 3)

2 (Homo sapiens cDNA clone IMAGE:4093756, partial cds):

acacatccgtctcctctgcgatataaccaaatggtgttgacggttaat-NH2 (SEQ ID NO: 4)

2B: ttaatgttctaacaaggcgatcatcatcaaaacggagattagaggttatac-NH2 (SEQ ID NO: 5)

3 (hypothetical protein FLJ14668):

taaggaggatcagctcatcctagccaaagttgtctactttctcccttga-NH2 (SEQ ID NO: 6)

4 (3-ketoacyl CoA thiolase beta-subunit of mitochondrial trifunctional protein, exon 8, 9, 10):

ccgttagggcttgcgtatgcagggttagttggccatctgctccagtga-NH2 (SEQ ID NO: 7)

5 (chromatin assembly factor 1, subunit B (p60)):

tgtgtgcacttcacgaggatgccaggaggactcactgatttcacact-NH2 (SEQ ID NO: 8)

5B: atactctaaaattcgacagagtaaaatctcaaattactttctatcttcc-NH2 (SEQ ID NO: 9)

6 (transcription factor 3, TCF3):

actgctgttcttcctccgcgcgtggtaatctgtttgaattctatg -NH2 (SEQ ID NO: 10)

7 (cDNA FLJ37123 fis):

cggaagtggaggcgcatgcagcgccctgcctggagccaggcgatc-NH2 (SEQ ID NO: 11)

7S:

NH2-atgcctggctccaggcaggaggcgctgcacgcctccaacttccg (SEQ ID NO: 12)

8 (adenosine monophosphate deaminase 2, isoform L):

aacaccactcccggggttgagtggcagatccaggacttgcagcaactgt-NH2 (SEQ ID NO: 13)

8B: tatgaaacactgcagttcacagcaaaggcctcagtccagaacacaacata-NH2 (SEQ ID NO: 14)

9 (chromatin assembly factor 1, subunit B (p60)):

tgtgtcacttcacgaggatgccaggaggactcactgatttcacact-NH2 (SEQ ID NO: 15)

10 (isoleucine-tRNA synthetase):

tgtaacctgctccaacatgactgcataaggtaagtgtcaa-NH2 (SEQ ID NO: 16)

11 (seryl-tRNA synthetase):

tggttcatcagtcataatgatggccatgcgaggagaca-NH2 (SEQ ID NO: 17)

12 (Ribosomal Protein L32):

tactcatttcactgcgcagcctggcattgggtggactctgat-NH2 (SEQ ID NO: 18)

13 (actin, beta):

actggccatttccttagagagaagtgggtggcttttaggatggcaag-NH2 (SEQ ID NO: 19)

13S:

NH2-ttgccatcctaaaagccaccccactctctctaaggagaatggcccagt (SEQ ID NO: 20)

14 (ubiquitin B):

atcttggccttcacatttcgatgggtcactgggctccacccaggt-NH2 (SEQ ID NO: 21)

For Figure 8:

CAPTURE SEQUENCES

1 (glutamyl-prolyl-tRNA synthetase):

gagggttccaggttatattcctggccagtttctccttatattcagct-NH2 (SEQ ID NO: 3)

2 (Homo sapiens cDNA clone IMAGE:4093756, partial cds):

acacatccgtctcctctgcgatataaccaaatggtgttgacgggtgaat-NH2 (SEQ ID NO: 4)

2B: ttaatgttctaacaaggcgatcatgcacaaacggagattagaggttatac-NH2 (SEQ ID NO: 5)

3 (hypothetical protein FLJ14668):

taagggagtcagtcatcctagcccaagttgcctactttctcccttga-NH2 (SEQ ID NO: 6)

4 (3-ketoacyl CoA thiolase beta-subunit of mitochondrial trifunctional protein, exon 8, 9, 10):

ccgttagggcttcatgaaatgcaggtagttggccatctgcctcaggta-NH2 (SEQ ID NO: 7)

5 (chromatin assembly factor 1, subunit B (p60)):

tgtgtcacttcacgaggatgccaggaggactcactgatttcacact-NH2 (SEQ ID NO: 8)

5B: atactctaaaattcgacagagataaaatctcaaattacttctcatctcc-NH2 (SEQ ID NO: 9)

6 (transcription factor 3, TCF3):

actgctgttcttcctcgcgctgggtgaatctcggttgaattctatg -NH2 (SEQ ID NO: 10)

7 (cDNA FLJ37123 fis):

cggaaggaggcgcatgcagcgccctgcggagccaggcgatc-NH2 (SEQ ID NO: 11)

7S:

NH2-atgcgcctggctcccaggcaggaggcgctgcatgacgcctccaacttccg (SEQ ID NO: 12)

8 (adenosine monophosphate deaminase 2, isoform L):

aacaccactcccggggttgagtggcagatccaggacttgcagcaactgt-NH2 (SEQ ID NO: 13)

8B: tatgaaacactgcagttcacagcaaaggcctcagtccagaacacaacata-NH2 (SEQ ID NO: 14)

9 (chromatin assembly factor 1, subunit B (p60)):

tgtgtgcacttcacgaggatgccaggaggactcactgatttcacact-NH2 (SEQ ID NO: 15)

10 (isoleucine-tRNA synthetase):

tgtaacctgctccaaacatgactgcataggtgtcaaggtaagtgtcaa-NH2 (SEQ ID NO: 16)

11 (seryl-tRNA synthetase):

tggttcatcagtcataatgatgggtccctatgcccattgcgaggagaca-NH2 (SEQ ID NO: 17)

12 (Ribosomal Protein L32):

tactcatttcttcactgcgcaggcctggcattgggtggactctgat-NH2 (SEQ ID NO: 18)

13 (actin, beta):

actggccattctccttagagagaagtgggtggcttttaggatggcaag-NH2 (SEQ ID NO: 19)

13S:

NH2-tgccatcctaaaagccaccccacttcctctaaggagaatggcccagt (SEQ ID NO: 20)

14 (ubiquitin B):

atcttggcctcacatttcgatgggtcactgggctccacctccagagt-NH2 (SEQ ID NO: 21)

For Figure 9:

Capture oligos were AarrayControl Sense oligo Spots 1-8 (sequence not available) (Cat#1781, Ambion, Austin, Texas, USA)

The detection probe oligonucleotides designed to detect target RNA sequences comprise a steroid disulfide linker at the 5'-end followed by the recognition sequence. The sequences for the probes are described:

For Figure 1:

5'-SaaaaaaaaaaaaaaaaaaA-3' (SEQ ID NO: 22)

For Figure 2:

5'-Saaaaaaaaaaaaaaaaaa-3' (SEQ ID NO: 22)

For Figure 3:

5'-Saaaaaaaaaaaaaaaaaa-3' (SEQ ID NO: 22)

For Figure 4:

5'-Saaaaaaaaaaaaaaaaaa-3' (SEQ ID NO: 22)

For Figure 5:

5'-S-ttttttttttttttttt-3' (SEQ ID NO: 23)

For Figure 6:

5'-S-ttttttttttttttttt-3' (SEQ ID NO: 23)

For Figure 7:

5'-S-ttttttttttttttttt-3' (SEQ ID NO: 23)

For Figure 8:

5'-S-ttttttttttttttttt-3' (SEQ ID NO: 23)

For Figure 9:

5'-S-ttttttttttttttttt-3' (SEQ ID NO: 23)

S indicates a connecting unit prepared via an epiandrosterone disulfide group;

Please replace the paragraphs at page 31 line 30 to page 32 line 16 with the following paragraphs:

Figure 1 Probe: gold-S'-5'-aaaaaaaaaaaaaaaaaaaa-3' (SEQ ID NO: 22)

Figure 2 Probe: gold-S'-5'- aaaaaaaaaaaaaaaaaaaaa -3' (SEQ ID NO: 22)

Figure 3 Probe: gold-S'-5'- aaaaaaaaaaaaaaaaaaaaaa -3' (SEQ ID NO: 22)

Figure 4 Probe: gold-S'-5'-aaaaaaaaaaaaaaaaaaaa -3' (SEQ ID NO: 22)

Figure 5 Probe: gold-S'-5'-ttttttttttttttttt-3' (SEQ ID NO: 23)

Figure 6 Probe: gold-S'-5'-ttttttttttttttttt -3' (SEQ ID NO: 23)

Figure 7 Probe: gold-S'-5'-ttttttttttttttttt -3' (SEQ ID NO: 23)

Figure 8 Probe: gold-S'-5'-ttttttttttttttttt -3' (SEQ ID NO: 23)

Figure 9 Probe: gold-S'-5'-ttttttttttttttttt -3' (SEQ ID NO: 23)

Please replace the paragraph at page 33 line 28 to page 34 line 8 with the following paragraph:

15 nm gold nanoparticles were functionalized with poly dA (20mer) (5'-aaaaaaaaaaaaaaaaaaaa-3'; SEQ ID NO: 24). In order to compare the fluorescent signal and the universal nanoparticle probe signal, the corresponding 6 RNA targets (each about 1Kb in length and each containing a 30mer poly A tail) were reverse transcribed with poly dT primer (18mer) in the presence of Cy3- or Cy5-labeled nucleotides purchased from Amersham (Piscataway, NJ, USA) using the procedure recommended by the manufacturer. The reverse transcription was carried out by mixing different amounts of

the 6 RNA targets to generate a target concentration gradient. For example, in one tube, 100ng RNA-1, 10ng RNA-2, 10ng RNA-3, 1ng RNA-4, 0.1ng RNA-5 and 0ng RNA-6 were mixed together and labeled with Cy3. In another tube, 0.1ng RNA-1, 1ng RNA-2, 10ng RNA-3, 10ng RNA-4, 100ng RNA-5 and 0ng RNA-6 were mixed together and labeled with Cy5. The purified labeled targets of each tube were diluted in final volume of 50ul.